U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

UNIFORM CONTRACT FORMAT

SCIENCE AND TECHNOLOGY SUPPORT

SECTION B -SUPPLIES OR SERVICES AND PRICES/COSTS

CONTRACT DEFINITION - INDEFINITE QUANTITY/FIXED-UNIT-RATE

This is an Indefinite-Quantity Contract as defined at Subpart 16.504 of the Federal Acquisition Regulation (FAR) and in Section 1, clause FAR 52.216-22, Indefinite - Quantity, herein. Services or supplies provided by the contractor under this contract shall be secured by the issuance of delivery orders (for supplies) or task orders (for services) placed in accordance with the following clauses: FAR 52.216-18, Ordering, FAR 52.216-19 Delivery Order Limitation, and the Clause [X] "Ordering Procedures."

MINIMUM/MAXIMUM ORDERING FOR INDEFINITE QUANTITY CONTRACTS (SERVICES OR SUPPLIES)

(a) The Government shall place orders under this contract that shall cumulatively total at least the minimum dollar value of $300,000.

(b) The maximum cumulative dollar value of orders placed under this contract shall not exceed $20,000,000.

(c) The Government is not obligated to order any specific minimum or maximum hours from any or combination of categories.

(See Section 1, clause at FAR 52.216-22, Indefinite Quantity)

LABOR CATEGORIES, UNIT PRICES PER HOUR, AND PAYMENT

The contractor shall provide the following types of labor at the corresponding unit price per hour in accordance with the terms of this contract. The unit price per hour is inclusive of the hourly wage plus any applicable labor overhead, General and Administrative (G&A) expenses, and profit. Payment shall be made to the contractor upon delivery to and acceptance by the Government of the required services. The total amounts billed shall be derived by multiplying the actual number of hours worked per category by the corresponding price per hour.

[See attached spreadsheet]

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

UNIFORM CONTRACT FORMAT

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

I. Background Statement and Need for Services

The U.S. Department of Housing and Urban Development (HUD) is required by law to conduct a substantial amount of activity pertaining to the reduction of lead-based paint and other safety and health hazards in housing. Within the Office of Healthy Homes and Lead Hazard Control, this activity includes grant program administration and oversight, issuance and enforcement of regulations, issuance of guidance material, scientific and policy technical studies, training, technical assistance, outreach, and interagency coordination, among other programs. The authorities for these programs are the Residential Lead-Based Paint Hazard Reduction Act of 1992, which is Title X of the Housing and Community Development Act of 1992, and the Housing and Urban Development Act, especially sections 501 and 502, among other statutes.

A. Lead Safety.

Title X authorizes a program of grants for lead-based paint hazard reduction in privately owned housing occupied by households of low and moderate income. In fiscal years 1994 - 2002 HUD approved a total of approximately $703 million to 245 grantees. Administration of this program includes training and technical assistance for grantees and program monitoring.

Title X requires issuance and revisions to Departmental regulations pertaining to lead-based paint hazard reduction in Federally owned and assisted housing. HUD published the final rule in 2000 as part 35 of title 24 of the Code of Federal Regulations (24 CFR 35), subparts B through R; it went into effect September 15, 2002 and is known as the Lead-Safe Housing Rule. Title X also called for HUD and EPA jointly to issue regulations on lead-based paint hazard notification and disclosure in all sale and rental transactions for most housing built prior to 1978. The final rules requiring disclosure of known lead-based paint and lead-based paint hazards was published in March, 1996, as 24 CFR 35, subpart A; it went into full effect in December 1996 and is known as the Lead Disclosure Rule. With the issuance of the regulations, HUD is assisting regulated entities, other HUD offices, and State and local governments in compliance and engaging in enforcement. HUD is also updating the requirements and supporting documentation as needed. Title X also requires the issuance of technical guidelines for the conduct of federally supported risk assessment, inspection, interim controls, and abatement of lead-based paint hazards. The Department published *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* in 1995, revised the inspection chapter in 1997, and must update the *Guidelines* further as needed, based on scientific research and field experience.

The Act requires that research be conducted to develop improved methods for detecting, evaluating, and reducing lead-based paint hazards, and it calls for research into strategies to reduce the risk of lead exposure from exterior soil and interior lead dust in carpets, furniture and forced air ducts. Title X further specifies that HUD conduct research to establish performance

standards for various lead-based paint detection and hazard reduction methods, and to evaluate the performance and cost-effectiveness of interim controls and abatement strategies. The Department has ongoing research in these topics.

The Department estimates that 26 million fewer homes have lead-based paint in 2000 compared to 1990 when the lead hazard control grant program began. The Centers for Disease Control and Prevention estimates the average amount of lead in children's blood has declined by 25% from 1996-99. Ten years ago, there was no federal funding for local lead hazard control work in privately owned housing; today, the HUD program is active in over 250 jurisdictions across the country.

Core activities of the Office include:

- Operate a grant program (the HUD Lead-Based Paint Hazard Control Program) for State and local governments to develop and implement cost effective methods for the inspection and reduction of lead-based paint hazards in private owner-occupied and rental housing for low and moderate income families;

- Develops lead-based paint regulations, guidelines, and policies that 1) ensure that buyers and tenants of housing have the information they need to protect their children from lead-based paint hazards, and 2) reduce lead-based paint hazards in federally assisted and federally owned housing;

- Provide technical assistance to HUD Field Offices, Program Offices, housing authorities, nonprofit housing providers, local and state agencies, other federal agencies, housing developers, inspectors, real estate professionals, contractors and financiers, and public health authorities;

- Direct an evaluation of the hazard reduction methods used in the grant program to measure their effectiveness, cost and safety;

- Conduct demonstrations, studies, and standards development, based on scientific research and consensus to create a level playing field that encourages honest fair competition and a vibrant lead hazard control market;

- Maintain a community outreach program focused on disseminating program information via print and broadcast media, conferences and exhibits, the Internet, and fact sheets and brochures;

- Help build capacity at the State, local and private-sector levels to inspect and abate lead-based paint hazards;

- Create liaisons with State and local governments and the private sector regarding lead hazard reduction issues; and

- Enforce HUD's Lead Paint Disclosure Regulations.

B. Healthy Homes

Environmental hazards in the home harm millions of children each year. HUD launched its Healthy Homes Initiative (HHI) to protect children and their families from housing-related health and safety hazards.

Many health and safety hazards in the home are preventable. The HHI builds upon the Department's existing activities in housing-related health and safety issues - including lead hazard control, building structural safety, electrical safety, and fire protection – to address multiple childhood diseases and injuries in the home. The Initiative takes a holistic approach to these activities by addressing housing-related hazards in a coordinated fashion, rather than addressing a single hazard at a time. To direct these efforts, HUD developed a preliminary plan of baseline research and demonstration projects for HHI with the assistance of a panel of nationally recognized experts from the private sector and federal, state, and local governments.

HHI is a nationwide effort to reduce environmental hazards and includes partnerships and interagency agreements with a wide-variety of public and private organizations on the Federal, state, and local level. Community organizations, state and local governments, and federally-recognized Indian tribes, are educating and mobilizing community groups to take action to control hazards and create healthy home environments. This site helps users to learn how to take a part in HHI activities as a grantee, community partner, or resident/consumer.

HHI activities focus on researching and demonstrating low-cost, effective home hazard assessment and intervention methods, as well as on public education that stresses ways in which communities can mitigate housing-related hazards. Eligible activities may include:

- developing low-cost methods for hazard assessment and intervention
- improving our understanding of how the residential environment impacts health
- evaluating the effectiveness of interventions such as improved ventilation, moisture control, integrated pest management
- building local capacity to educate residents and mitigate hazards
- developing and delivering public-education programs

II. Objectives

The objective of this contract is to provide HUD with quick-response expert services and longer-term deliverables for the purpose of fulfilling the Department's responsibilities in the reduction of lead-based paint and other safety and health hazards in housing. This contract is being issued in the Science and Technology Support topic area, for which its specific objectives are to:

A. Design and conduct research and technical studies, laboratory-based and/or field-based as needed, using both primary and secondary data, that will develop or improve cost-effective methods for the evaluation and control of lead-based paint and other housing-related health hazards.

B. Design and conduct critical reviews of the scientific literature related to the assessment and control of residential health hazards.

D. Develop and disseminate technical guidance materials and provide technical support (e.g., environmental sampling protocols, develop and review quality control procedures) for OHHLHC grantees and for State and local governments implementing similar lead hazard treatment and/or housing-related health and safety improvement programs.

III. Scope of Work

A. The Contractor shall furnish the necessary personnel, materials, services, equipment, and facilities (except as otherwise specified herein), and shall travel and otherwise do all things necessary for or incidental to the performance of the work set forth in this Statement of Work. The individuals proposed for this requirement must meet the qualifications listed in Exhibit 1, Labor Categories, of this Section. The Contracting Officer will designate a Government Technical Representative (GTR) for this contract. The GTR shall designate a Government Technical Monitor (GTM) for the contract. Work shall be ordered through task orders issued by the Contracting Officer, and by task specifications issued by the GTR or the Contracting Officer.

B. Ordering of Work through Task Orders and Task Specifications.

1. Task Orders

a. From time to time, at its discretion, HUD may request the Contractor (and may also request one or more other firms awarded contracts under this statement of work, if any) to prepare a technical and cost proposal to perform work under a task order to be issued in accordance with the objectives of the contract. Before negotiations, the Contractor shall be allowed to correct minor, non-substantive omissions.

b. Each task order request for proposals will describe the work to be done, including its performance goals and deliverables; and the schedule, detailing the deliverables to the GTR / GTM for HUD review, and the return of HUD comments on draft deliverables. Examples of sample task order requests for proposals (for illustrative purposes only) are presented in Section J of this solicitation.

c. After negotiation and execution of a task order, the Contractor shall carry out the specified work in accordance with the requirements of the task order. The Contractor may adjust the numbers of hours within the negotiated labor categories and may adjust the other direct costs, provided that the total price of the task order and the schedule of the

task order are not exceeded.

2. Task Specifications -- Short-Term, Expert-Services Requests

a. From time to time, at its discretion, HUD may obligate funds under the contract for application to task specifications, which are requests for short-term, expert services, including labor of up to 60 person days, within a period of up to 180 calendar days. The Contractor shall not draw funds except as payment for individually executed task specifications.

b. Each task specification will describe the work to be done, including its performance goals and deliverables; and the schedule, detailing the deliverables to the GTR / GTM for HUD review, and the return of HUD comments on draft deliverables. The Task specification will also identify the anticipated number hours of effort for particular labor categories and the anticipated amount of other direct costs (e.g., materials, supplies, equipment, consultant services, travel, etc.), and shall designate a GTM for the task specification. Examples of sample task specifications (for illustrative purposes only) are presented in Section J of this solicitation.

c. The GTR / GTM shall transmit the task specification to the Contractor by mail, delivery service, fax or electronic mail, or with the Contractor's agreement, be available at the ordering office for the Contractor to receive. The Contractor shall sign and return the task specification to the GTR. The task specification shall be executed upon signature of both the Contractor and the GTR or Contracting Officer.

d. Upon execution of a task specification, the Contractor shall provide personnel to HUD with qualifications and/or skills matching the list of labor categories at rates established in the contract, and provide materials, supplies, equipment, travel, etc., in accordance with the scope of work of the task specification, within its schedule and total price. The Contractor may adjust the numbers of hours within the specified labor categories and may adjust the other direct costs, provided that the total price and the schedule of the task specification are not exceeded.

C. Sample Subjects of Work for Task Orders and Task Specifications

Following is a partial list drawn from the missions and responsibilities of the Office of Healthy Homes and Lead Hazard Control of the types of work that may be requested by task orders and/or task specifications under this contract. This list is provided for purposes of illustration only. In issuing task orders and task specifications under these contracts, HUD shall not be limited to the topics or tasks described below.

1. Design and conduct a study to estimate the effectiveness of OHHLHC grantees and State and local governments in the evaluation and reduction of lead-based paint and other housing-related hazards, such as moisture and mold, pest control, and indoor environmental quality.

2. Review and summarize the scientific literature on the control of household allergens for the purpose of reducing asthma morbidity.

3. Create an archive of processed residential dust for use as quality control samples for environmental allergen analyses and conduct a study of intra- and inter-laboratory variability in the analysis of the dust.

4. Develop standardized environmental assessment and sampling for Healthy Homes grantees.

5. Analyze data on residential lead exposure from the National Health and Nutrition Examination Survey (NHANES) to identify factors that are predictive of elevated dust-lead and blood-lead (of index child) levels.

6. Organize peer reviews of reports on the results of technical studies.

7. Prepare manuscripts of technical results for publication in peer reviewed literature.

8. Develop and provide guidance to builders and property managers on preventing and controlling moisture problems in homes.

9. Provide technical conference presentations and support for technical conference sessions and exhibitions.

10. Prepare public use datasets.

D. Standard Sequence of Work Tasks

In conducting the work hereunder, the Contractor shall perform, but not be limited to, the following tasks in accordance with the objective and general scope of the contract and the individual requirements of each task order. The Contractor must obtain approval from the Government Technical Representative (GTR) of the accomplishments and/or products of each major task before such results and/or products may be used in a subsequent stage of the task order. Unless otherwise noted, the GTR will advise the Contractor of HUD's appraisal of the work product within thirty (30) days following its submission. The Contractor shall modify the product, if required, to conform with the results of HUD's review and resubmit the product to the GTR within fifteen days for approval, or other time period specified by HUD.

1. Orientation

The Contractor's Project Director for the task order or task specification, and other key contractor personnel shall attend a meeting at HUD Headquarters, or other location acceptable to the GTR, or participate in a conference call or other activity acceptable to the GTR for the purpose of establishing a common understanding between the Contractor and

HUD personnel with regard to each task order objective and the scope of work necessary to achieve the objectives.

2. Management and Work Plan

a. Plan preparation and acceptance. For each specified task order or task specification, the Contractor shall prepare a Management and Work Plan for review and approval by the GTR. The plan shall govern the execution of the requested services.

b. Plan elements. The Plan shall:

i. Provide a narrative of the overall expected flow of the work, how each activity (major subtask) will be accomplished and what deliverables will be provided, and shall relate this description to the allocation of staff and other resources.

ii. Detail the allocation of contract resources (key personnel, person-hours in each labor category, labor costs, and other direct costs including amounts of supplies, equipment, consultant services, travel, etc.) for each activity to accomplish the work and submit deliverables to the GTR/GTM.

iii. Identify the start date, major milestone dates (including dates of submissions), and completion dates, for each activity. Where there is interdependence among activities, the Plan shall indicate the relationship between one activity and another.

c. The Plan may be revised from time to time, upon review and approval by the GTR, as design and implementation considerations dictate.

3. Carrying Out Tasks under the Management and Work Plan

The Contractor shall furnish the necessary personnel, service, and equipment, and shall travel and otherwise do all the things necessary for or incidental to the performance of these tasks as set forth in accordance with the general objective of the contract and provisions of specific task orders.

Travel to attend a “kick-off” meeting at the OHHLHC office is required. The Project Manager shall attend this meeting, along with at least one senior member of the staff. travel expenses shall be minimized.

Travel shall be conducted to perform, observe or deliver work specified under the individual Task Orders or Task Specifications issued under the Contract, and shall involve only personnel with appropriate qualifications for accomplishing such work. Travel schedules shall depend on the locations and timing of work activities and tasks in the Task Order and Task Specification. The Contractor shall schedule travel to minimize travel duration and expense, to the extent feasible.

4. Work Products

The Contractor shall prepare interim and final work products consistent with the requirements of each task order, which will be submitted to the GTR on the dates specified. Draft versions of all reports shall be submitted for HUD review, comment, and approval. If oral presentations of findings by the Contractor are requested by HUD, they shall be provided in a timely manner.

5. Management Reports

The Contractor shall submit management reports consisting of financial and narrative progress reports (HUD Form 661.1 or similar reports in paper or electronic formats) for task orders lasting more than 91 days. The size and complexity of the individual task orders will dictate whether the management reports shall be required and on what periodic basis; in most cases such reporting will be quarterly, supplemented by management reporting on task progress associated with significant deliverables, and financial status concurrent with invoicing. These management reports are separate from any technical progress reports submitted under the Management and Work Plan.

6. Final Reports

a. Task orders. The Contractor shall prepare and submit final technical and management reports for each task order, for review and approval that is in accordance with the requirements and schedule of the Management and Work Plan .

b. Task specifications. The Contractor shall prepare and submit final technical and management reports for each task specification, for review and approval that is in accordance with the requirements and schedule of the Management and Work Plan.

c. Contract. The final technical and management reports for the contract shall be submitted within 30 days of the completion of the work on all task orders and task specifications.

F. Submittals

Unless otherwise agreed or required by the Government for a specific task order or task specification, submittals shall be as provided herein, in print and electronic forms.

1. Number and form of drafts:

a. Print copies:

(1) Reports and related text: Five copies, at least one of which shall be unbound, shall be submitted. Lines, pages, sections, attachments, figures and tables shall be numbered.

(2) Posters, brochures, flyers and other printed materials: Two copies shall be submitted.

b. Electronic copies:

(1) One copy of text and additional materials shall be submitted in an electronic medium described in paragraph III.F.3, below, except that electronic mail may be used in accordance with subparagraph (2).

(2) Electronic files may be submitted by electronic mail to the GTM / GTR, if agreed upon in advance by the GTR / GTM. However, if an electronic mailing attempt has not been successful by the day after Government receipt of the paper copies for the submittal (even if as a result of the Government's portion of the electronic mail system), the Contractor shall submit electronic file media by the next working day after notice by the GTR / GTM of transmission failure.

c. Replication: When requested, additional copies, whether print or electronic, shall be submitted; for any document, fewer than 5,000 impressions will be requested.

2. Form and number of final documents:

a. Print copies:

(1) Reports and related text: Five copies, at least one of which shall be unbound, shall be submitted. Pages, sections, attachments, figures and tables shall be numbered.

(2) Posters, brochures, flyers and other printed materials: Five copies shall be submitted.

b. Electronic copies: Three copies of final text and additional materials shall be submitted in an electronic medium, using the methods in paragraph III.F.1.b, above.

c. Replication: When requested, additional copies, whether print or electronic, shall be submitted; for any document, fewer than 5,000 impressions will be requested.

3. Submittal Media:

a. Print media:

(1) Paper copies of submittals shall be on 8-1/2 by 11 inch paper, with the main text body in 10- to 12-point type, and may be printed either single- or double-sided.

(2) Posters, brochures, flyers and other printed materials shall be in formats agreed upon.

b. Electronic media:

(1) Electronic file formats:

(a) Formats used by HUD staff's standard computer programs as of the time of award of the contract (in Microsoft© Office© 2000, e.g., Word 2000, Excel 2000, PowerPoint 2000, Access 2000, etc.); statistical and relational data base routines / procedures / programs / tables in SPSS 6.1 files, or in SAS export files readable by SPSS 6.1; and raw data for large tables (over 1.2 million characters) in comma-delimited ASCII files.

(b) Other formats shall be as specified by the task order or task specification. In accordance with the expected continued evolution of personal computer programs in widespread commercial use, HUD expects that its standard computer programs will change during the course of the contract, in which case, the replacement standard program output formats shall be used. The GTR may specify additional program output formats in widespread commercial use as being standard for submittal during the course of the contract.

(c) Any Portable Document File (.pdf) format files shall be accompanied by editable source files for text and/or tables (e.g., word processing and/or spreadsheet files in Microsoft Word 2000 ".doc" format and/or Excel 2000 ".xls" format).

(d) Electronic files submitted shall not be copy-protected.

(2) Electronic file media:

(a) For files of up to 1.2 million characters: Floppy disks: 3-1/2 inch, 1.44 megabyte capacity Microsoft DOS©-compatibly formatted floppy disks, or as otherwise specified by the task order or task specification. If acceptable to the GTR / GTM, media specified in subparagraph (b) may be used.

(b) For files of more than 1.2 million characters: Compact disk read-only memory (CD-ROM) disks in standard commercial (ISO 9660) format, or DVD disks in standard commercial (MPEG-2) format.

c. Audio/visual media:

(1) Audio tape cassettes: Type I high bias stereophonic cassettes of no more than 20 minutes duration at standard play speed.

(2) Video tape cassettes: Final versions of video tapes will be provided in 1/2 inch VHS© high/premium quality cassettes of 20 minute duration at standard play speed, except that masters shall be provided on 1/2 inch Beta© SP cassettes of appropriate

length. In addition, raw footage shall be provided on 1/2 inch Beta© SP cassettes and on 1/2 inch time coded, window burned VHS© cassettes. Paper or electronic video logs and releases shall be provided with all raw footage.

(3) Video disks: Standard commercial CD-ROM (ISO 9660) format or DVD (MPEG-2) format, or as otherwise specified by the GTR / GTM.

(4) Other media, programs and formats: As specified by the task order or task specification.

SECTION C, EXHIBIT 1: LABOR CATEGORIES

The individuals proposed for this contract requirement must meet the qualifications listed in this Exhibit.

Architect

The architect must have experience in the design of single-family and/or multi-family homes. This experience should include the development and review of plans for lead hazard control and the implementation of such plans. Familiarity with materials used in the lead hazard control industry encapsulants, structural enclosures, etc.) and knowledge of applicable guidelines (e.g., HUD and ASTM) and regulations is required. Certification as a lead-based paint inspector and/or risk assessor is preferred. The architect must also possess a thorough understanding of the writing and enforcement of building codes and experience in estimating construction and rehabilitation costs.

Basic Requirements:

(A) Senior level: A Bachelor of Architecture degree from an accredited college or university or registration to practice architecture by a State registration board which is in compliance with the minimum provisions of the National Council of Architectural Registration Boards, and at least 5 years experience.

(B) Junior level: A Bachelor of Architecture degree from an accredited college or university or registration to practice architecture by a State registration board which is in compliance with the minimum provisions of the National Council of Architectural Registration Boards; and at least 2 years experience.

Chemist (Inorganic, Analytical, Physical)

A graduate degree in chemistry specific to the position being sought (e.g., in inorganic, for the Inorganic Chemist position, analytical for the Analytical Chemist position, etc.) is required. The Chemist must have experience in research, teaching, or product development. This experience should have an emphasis on the chemistry of heavy metals, in particular lead, and heavy metal compounds. Familiarity with the lead hazard control industry is desirable. In particular, a thorough knowledge of the limitations and advantages of various lead-based paint inspection techniques (in use or being developed) such as XRF, spot test kits, and anodic stripping voltammetry, is desirable.

Basic Requirements:

(A) Senior level: Ph.D. in chemistry from an accredited university, with 5 years experience, or a Masters degree in chemistry and 10 years of relevant, senior level experience.

(B) Junior level: Masters degree in chemistry from an accredited college, with 3 years experience.

Communication and Outreach Specialist

The Communication and Outreach Specialist must have at least 3 years experience interfacing with communities and organizations on either a local or national basis regarding environmental health issues. This experience should include the development and dissemination of educational materials, presentations, and partnering with local agencies and/or businesses to transmit relevant information. Experience with lead hazard control Issues Is desirable.

Basic Requirements:

(A) Senior level: A Bachelor's degree in communications, sociology, or other relevant discipline from an accredited college, with at least 5 years experience performing communication and outreach tasks; or at least 10 years relevant work experience.

(B) Junior level: A Bachelor's degree in communications, sociology, or other relevant discipline from an accredited college, with at least 3 years experience performing communication and outreach tasks; or at least 5 years relevant work experience.

Conference Management Specialist

The Conference Management Specialist must have at least 2 years experience in the planning and management of conferences. This experience should include the planning and management of both medium size conferences (about. 2000 people) as well as smaller sized locally-held conferences (about 300 people).

Basic Requirements:

(A) Senior level: A Bachelor's degree from an accredited college, with 3 years experience managing conferences; or an A.A. degree from an accredited college, with 5 years experience, or 10 years of relevant work experience.

(B) Junior level: A Bachelor's degree from an accredited college, with 1 year experience managing conferences- or an A.A. degree from an accredited college, with 3 years experience; or 5 years of relevant work experience.

Desktop Publishing Specialist

The Desktop Publishing Specialist must have experience in the editing, graphical layout, and production of materials using desktop computer publishing programs and equipment. Experience with the development of newsletters related to the environmental health field is desirable.

Basic Requirements:

(A) Senior level: A bachelor's degree in English, journalism or related field from an accredited college, with 5 years of desktop publishing experience; or 10 years of relevant work

experience.

(B) Junior level: A bachelor's degree in English, journalism or related field from an accredited college, with 3 years of desk-top publishing experience; or 5 years of relevant work experience.

Economist

The economist must have experience in applied economic research, including cost-benefit analysis. Experience in the assessment of economic conditions in disadvantaged urban areas, and in the design of surveys and the analysis of survey data, is desirable.

Basic Requirements:

(A) Senior level: A Ph.D. in economics from an accredited university, and at least 5 years of applied economics research, or a Masters degree in economics and 10 years of relevant experience at the senior level.

(B) Junior level: A Ph.D. in economics or closely related field from an accredited college, and 1 year of experience, or a Masters degree in economics or related discipline from an accredited university, and 3 years experience.

Editor/Writer (Technical and Scientific)

The Editor/Writer must have at least 5 years experience editing (Including copy editing) and/or writing technical or scientific materials. Major portions of the experience must be in editing materials for both professional audiences and, separately, for lay audiences. The professional materials may be in the form of published peer reviewed journal articles, books, or and/or reports. The lay materials may be in the form of magazine or newspaper articles, books, brochures and/or flyers.

Basic Requirements:

(A) Senior level: A Bachelor's degree in English, journalism, or related discipline from an accredited college, and 5 years of experience editing/writing technical or scientific materials.

(B) Junior level: A Bachelor's degree in English, journalism, or related discipline from an accredited college, and 1 year of experience editing/writing technical or scientific materials-, or 3 years of experience editing and writing technical or scientific materials.

Engineers (Environmental, Civil, Mechanical)

The Engineers must have experience related to the environmental health field- experience in the lead hazard control industry is preferred. Experience should include the review, design and construction management of projects where hazardous materials must be removed, controlled, or minimized. Designation as a Professional Engineer is required. A bachelor's degree in

engineering from a school accredited by the Accreditation Board for Engineering and Technology is required-, this degree must be specific to the activities being undertaken (e.g., environmental for the Environmental Engineer position, civil for the Civil Engineer position etc.). Certification as a lead-based paint inspector and/or risk assessor is desirable. A civil engineer must also possess a thorough understanding of the writing and enforcement of building codes and experience in estimating construction and rehabilitation costs.

Basic Requirements

(A) Senior level: A Bachelor's degree in engineering, from an accredited college with 5 years experience related to the environmental health field. Certification as a lead-based paint inspector and/or risk assessor is required.

(B) Junior level: A Bachelor's degree in engineering from an accredited college with 2 years experience related to the environmental health field.

Environmental Health Science Specialist

The Environmental Health Science Specialist must have at least 5 years experience in dealing with environmental health issues. Experience with the lead-hazard control Industry Is highly desirable.

Basic Requirements

(A) Senior level: Ph.D. or equivalent in environmental health or closely related discipline (e.g., environmental chemistry, toxicology) from an accredited university-, and 5 years experience, or a Masters degree With 10 ears of relevant experience at the senior level.

(B) Junior level: M.S. or equivalent in environmental health or closely related discipline from an accredited university, and 3 years experience.

Epidemiologist

The Epidemiologist must have at least 5 years experience conducting, designing, and reviewing environmental and/or occupational epidemiological studies. Some of the experience must include studies involving human lead exposure.

Basic Requirements:

(A) Senior level: Ph.D. or equivalent in epidemiology from an accredited university, with 5 years experience; or Masters degree in epidemiology with 10 years experience.

(B) Junior level: Ph.D. in epidemiology from an accredited university, with 1 year experience.; or Masters degree in public health and/or epidemiology from an accredited university, and 5 years experience.

Graphics Arts Specialist

The Graphics Arts Specialist must have experience in the development and production of graphics for newsletters, journal articles, books, and other printed materials. Experience producing graphics in the environmental health field is desirable.

Basic Requirements:

(A) Senior level: A Bachelor's degree in art or related discipline from an accredited college, with a concentration in photography and the graphic arts, and 5 years of relevant work experience', or 10 years of relevant work experience.

(B) Junior level: A Bachelor's degree in art or related discipline from an accredited college, with a concentration in photography and the graphic arts, and 2 years of relevant work experience, or 5 years of relevant work experience.

Housing Policy Analyst

The Housing Policy Analyst must have the required skills and experience in the analysis of housing policy. Knowledge of lead-based paint legislation and the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing is* desirable.

(A) Senior level: A Master's degree in business, urban planning, or one or the social sciences and 5 years of senior level experience in conducting housing policy analysis.

(B) Junior level: A Bachelor's degree in urban or community planning, business, or one of the social sciences and 2 years of experience conducting housing policy analysis.

Housing Program Specialist

The Housing Program Specialist must have at least 5 years experience in managing government housing programs, including rehabilitation housing programs, and analyzing housing program policy. Knowledge of lead-based paint legislation and the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* is desirable.

Basic Requirements:

(A) Senior level: A Bachelor of Arts or Bachelor of Science degree in community planning, urban planning, or other related discipline from an accredited college, and at least 5 years of relevant work experience; or at least 10 years of relevant work experience.

(B) Junior level: A Bachelor of Arts or Bachelor of Science degree in community planning, urban planning, or other related discipline, from an accredited college, and at least 1 year of relevant work experience-, or at least 3 years of relevant work experience.

Industrial Hygienist

The Industrial Hygienist must have at least 3 years experience with the lead-hazard control industry, including exposure and work practice monitoring, dust wipe sampling, lead-based paint

inspections and risk assessments, composing and reviewing specifications for lead-hazard control activities, and use of lead-related laws, regulations and guidance. A degree in industrial hygiene or engineering, physical science, or life sciences, that included 12 semester hours in chemistry, and 18 additional semester hours in chemistry, physics, engineering, health physics, environmental health, biostatistics, biology, physiology, toxicology, epidemiology, or industrial hygiene, is required.

Basic Requirements:

(A) Senior level: M.S. degree in industrial hygiene or related field from an accredited university, certification in the Comprehensive Practice of Industrial Hygiene and at least 3 years experience with the lead-hazard control industry.

(B) Junior level: B.S. or B.A. degree in industrial hygiene or related field from an accredited college, and at least 1 year experience in lead hazard control field.

Information Management Specialist

The Information Management Specialist must have at least 3 years experience managing environmental health or lead related information. Experience with computerized data base management is required. Experience with an information clearinghouse of center is desirable.

Basic Requirements:

(A) Senior level: A Master of Library Science or similar degree from an accredited university, and at least 3 years of relevant experience or bachelor's degree in English or related discipline from an accredited college, and at least 5 years of relevant experience.

(B) Junior level: A Master of Library Science or similar degree from an accredited university, and at least 1 year of relevant experience; or bachelor's degree in English or related discipline from an accredited college, and at least 3 years of relevant experience.

Lead-Based Paint Inspector and Risk Assessor

The Lead-Based Paint Inspector and Risk Assessor must have experience performing inspections and/or risk assessments and be state certified as a lead-based paint inspector or a lead-based paint risk assessor. Certification in the comprehensive practice of industrial hygiene, or as a safety professional, or registration as an architect or as a professional engineer is desirable.

Basic Requirements:

(A) Senior level: A Bachelor's degree from an accredited college, certification by a State as a lead-based paint inspector or risk assessor, and at least 5 years experience in the lead-hazard control industry.

(B) Junior level: Certification by a State as a lead-based paint inspector or risk assessor, and at least 3 years experience in the lead-hazard control industry.

Lead-Based Paint Construction Specialist

The lead-based paint construction specialist must have experience in the abatement and control of lead-based paint hazards and other environmental hazards. The specialist must have all appropriate certifications and licenses, in accordance with federal, state, and local regulations, for the performance of lead-hazard control work. This must include certification as a lead-abatement supervisor from a State Lead-Based Paint Contractor and Certification and Accreditation Program which meets the requirements of the EPA or a State program authorized by EPA under of the Toxic Substances Control Act and (1) a Bachelor's degree in engineering, architecture, or a related profession and 1 year of experience in building construction and design or a related field; or (2) 4 years of experience in building construction and design or a related field.

Basic Requirements:

(A) Senior level: At least 10 years experience in the abatement and control of environmental hazards. At least 5 years of this experience must have been in the lead-hazard control industry. State certification as a lead-abatement supervisor.

(B) Junior level: The lead-based paint contractor must have at least 5 years experience in the abatement and control of environmental hazards, At least 2 years of this experience must have been in the lead-hazard control industry. State certification as a lead-based paint abatement supervisor.

Lead Poisoning Prevention Specialist

The Lead Poisoning Prevention Specialist must have experience in providing guidance on the means and methods of identifying and preventing childhood lead poisoning. This experience should include conducting lead-based paint inspections, risk assessments, and follow-up activities on cases of lead poisoning. Familiarity with implementing the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* and Centers for Disease Control and Prevention guidance on the screening for, and prevention of, childhood lead poisoning.

Basic Requirements:

(A) Senior level: A Bachelor's degree from an accredited university, in biology, environmental science, chemistry or a related discipline from an accredited university, with at

least 10 years of relevant experience. State certification as a lead-based paint risk assessor is desirable.

(B) Junior level: A Bachelor's degree from an accredited university, in biology, environmental science, chemistry or a related discipline from an accredited university, with at least 2 years experience. State certification as a lead-based paint risk assessor is desirable.

Pediatrician

The pediatrician must be a medical doctor with a valid Board certification in the specialty of general pediatrics, at least 5 years of practice following certification, and a medical license in the State(s) of practice. Experience in the treatment of lead-poisoned children and familiarity with current Centers for Disease Control and Prevention guidance on screening for, diagnosing and treating children with elevated blood lead levels. The pediatrician should also have a good understanding of children's environmental health issues, especially the relationship between the indoor environment and health status. A Masters degree in Science or Public Health is desirable.

Basic Requirements:

(A) Senior level: At least 10 years of practice following certification in the specialty with at least 3 years experience in childhood lead poisoning prevention, including research experience.

(B) Junior level: At least 5 years of practice following certification in the specialty with at least 1 year of experience in childhood lead poisoning prevention. Research experience is desirable.

Public Health Educator

The public health educator must have at least 3 years experience in the field of public health education and outreach, including at least 1 year of experience with lead poisoning prevention and other environmental health issues. Experience with outreach to disadvantaged inner city populations, including developing and delivering health education materials, is desirable.

Basic Requirements:

(A) Senior level: Master of Public Health or equivalent degree from an accredited university, with an emphasis in health education or related discipline with 10 years of experience, or a Ph.D. or equivalent from an accredited university, with an emphasis in health education or related discipline with 5 years of experience.

(B) Junior level: A Bachelor degree in public health, environmental health or related discipline from an accredited college, with at least 3 years of relevant experience.

Quality Assurance Coordinator

The quality assurance (QA) coordinator must possess a thorough understanding of QA concepts, and experience with U.S. EPA quality assurance requirements (e.g., Quality Assurance Project Plans, Data Quality Objectives, etc). Familiarity with ISO 14000 environmental management systems quality procedures is desired. The quality assurance coordinator will serve as QA manager on selected major projects with responsibility for coordinating all internal/external audits/inspections; prepare QA/Quality Control (QC) sections of research work plans; interact effectively with auditors and project team; and maintain a thorough knowledge of all QA regulations with potential impacts on projects.

(A) Senior Level: A Bachelor of Science Degree from an accredited university in a scientific discipline plus 5 years of QA/QC experience, or a Master of Science Degree from an accredited university in a scientific discipline plus 3 years of QA/QC experience.

(B) Junior Level: A Bachelor of Science Degree from an accredited university in a scientific discipline with 3 years of QA/QC experience or a Master of Science Degree from an accredited university in a scientific discipline plus 1 year of QA/QC experience.

Sampling Statistician

A Survey Statistician must posses the appropriate terminal degree for the design and analysis of large-scale and small-scale surveys that are nationally representative and/or representative of small geographic areas. Experience in design and analysis of surveys related to public health education, program evaluation, and environmental health is desirable.

Basic requirements:

(A) Senior level: Ph.D. in statistics, biostatistics or related discipline, from an accredited university, and 5 years experience in designing surveys and analyzing survey data. or a Masters degree in statistics or a related discipline and 10 years of relevant experience at the senior level.

(B) Junior level: Ph.D. in statistics, biostatistics or related discipline, from an accredited university, and 1 year of experience in designing surveys or Masters degree in statistics or related discipline, from an accredited university, and 3 years experience in designing surveys.

Secretary

The Secretary must have at least 2 years experience working in an office environment and be proficient in word processing, spreadsheet, and other commonly used office management software.

Basic Requirements:

(A) Senior level: At least 5 years experience working in an office environment performing word processing, spreadsheet and other standard office tasks.

(B) Junior level: At least 2 years experience working in an office environment performing word processing, spreadsheet and other standard office tasks.

Social Scientist

The Social Scientist must posses the appropriate terminal degree for questionnaire development and the analysis of survey and other social science data. Experience in questionnaire development and analysis of surveys related to public health education, program evaluation, and/or environmental health.

Basic requirements:

(A) Senior level: Ph.D. in sociology or related discipline from an accredited university, and 5 years experience in questionnaire development and analysis of survey and other social science data.

(B) Junior level: Ph.D. in statistics or related discipline, from an accredited university, and 1 year of experience; or Masters in sociology or related discipline, from an accredited university, and 3 years experience in questionnaire development and analysis of survey and other social science data.

Statistical Programmer

The statistical programmer must possess a Bachelor of Science Degree in statistics, computer science, mathematics or a related field. The statistical programmer must have experience and/or training in managing statistical data, providing graphical support, and conducting statistical programming support to applied research projects using an appropriate complex software system such as SAS or S-Plus. The Statistical Programmer will typically work in coordination with a Statistician to analyze data and deliver statistical analysis results.

(A) Senior level: A Master’s degree from an accredited university, in mathematics, statistics, computer science or a related discipline with at least 2 years of experience data management and analysis involving a standard statistical software system, or a Bachelor’s degree from an accredited university with at least 10 years of relevant work experience.

(B) Junior level: A Bachelor's degree from an accredited university in mathematics, statistics, computer science or a related discipline with at least 2 years of experience data management and analysis involving a standard statistical software system.

Statistician

The Statistician must have at least 5 years of experience analyzing epidemiological or other field study data, and laboratory or clinical data, related to environmental health hazards, with at least 1 year of experience relating to human lead poisoning, prevalence of lead-based paint hazards, and the lead-hazard control industry; and education in biostatistics and experience performing

data analysis.

Basic Requirements:

(A) Senior level: Ph.D. in statistics or biostatistics from an accredited university, with 5 years of experience; or M.S. in statistics or biostatistics from an accredited university, with 10 years of experience.

(B) Junior level: Bachelor of Science Degree in statistics or biostatistics, or in a related field, including 15 semester hours in statistics or biostatistics (or mathematics and statistics, provided at least 6 semester hours were in statistics), and 9 additional semester hours in physical or biological sciences, medicine, education, or engineering, or the social sciences, and 3 years of relevant experience.

Toxicologist

The Toxicologist must have at least 5 years of research experience in the area of heavy metal toxicology with particular- emphasis on lead and lead compounds involved in lead-poisoning. The Toxicologist should also be familiar with current Centers for Disease Control and Prevention guidance on the evaluation of childhood blood lead levels and have a good understanding of the health effects of associated with other common environmental toxicants.

Basic Requirements:

(A) Senior level: A Ph.D. in toxicology preferably from an American Public Health Association-accredited school of Public Health and registration as a Diplomat of the American Board of Toxicology.

(B) Junior level: An M.S. degree in toxicology or biology from an accredited university, with at least 15 semester hours in toxicology or environmental health.

Training and Education Specialist

The Training and Education Specialist must have at least 5 years experience in the environmental health training and education field. Experience must be specifically relevant to the activity being performed; e.g., adult training, childhood education, etc. Experience with the lead-hazard control industry is desirable.

Basic Requirements:

(A) Senior level: A Bachelor's degree in education or related discipline from an accredited college, and 5 years in the environmental health field; or at least 10 years relevant work experience.

(B) Junior level: A Bachelor's degree in education or related discipline from an accredited college, and 3 years in the environmental health field; or at least 5 years relevant work

experience.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

UNIFORM CONTRACT FORMAT

SECTION J - LIST OF ATTACHMENTS

I. Sample Task Order

A. Develop a System for Assessing the Performance of X-Ray Fluorescence Analyzers in Measuring Lead in Wipe-Dust Samples

Offerors should prepare a proposal for the sample task order(s) listed and include it as part of their submissions. See Section L for proposal instructions.

Competitive Task Order

Develop a System for Assessing the Performance of X-Ray Fluorescence Analyzers in Measuring Lead in Wipe-Dust Samples

Statement of Work

1.0 OBJECTIVE

The objective of this Task Order is to develop and test a system for objectively measuring and reporting on the performance of portable X-Ray Fluorescence (XRF) analyzers in measuring lead in wipe dust samples. The envisioned system is analogous to the current system for assessing the performance of XRF analyzers for the in-situ measurement of lead in paint, in which the results of the testing are reported in a "Performance Characteristic Sheet" for each instrument that is tested.

This work will be performed under the direction of the HUD Office of Healthy Homes and Lead Hazard Control (OHHLHC).

2.0 BACKGROUND AND NEED FOR SERVICE

Subtitle D of Title X of the Housing and Community Development Act of 1992 authorizes HUD to conduct research to improve the assessment and control of residential lead-based paint hazards. This includes the development of improved methods (e.g., faster, more accurate, reduced cost) for the measurement of lead in environmental media such as dust and soil.

Currently, standard practice among lead hazard control professionals is to measure lead in paint using a portable XRF analyzer. The use of these instruments allows for lead content to be measured quickly in-situ without disturbance of the paint (see Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing; available tat*

www.hud.gov/offices/lead). HUD and the U.S. Environmental Protection Agency (EPA) developed a system for objectively testing the performance of portable XRF instruments in measuring lead in paint on different architectural substrates (e.g., wood, concrete, steel, plaster). The painted components were removed from buildings so that the testing would mimic "real world" conditions to the extent feasible, and lead concentrations in the paint on each component were determined with a high degree of certainty. These painted components are maintained for the federal government at an archive by Midwest Research Institute (MRI) in Kansas City, MO, under a contract with HUD to QuanTech.

The basic steps that are currently followed if a manufacturer wants an instrument to be tested are: 1) the manufacturer notifies the OHHLHC that it wants an instrument to be tested; 2) the manufacturer supplies MRI with the instrument to be tested and pays a fee to cover the costs of the testing; 3) the instrument in tested on the archived components by MRI and the results recorded; 4) the contractor analyzes the results and they are reported in a standard form referred to as a "Performance Characteristic Sheet" (PCS). If the manufacturer makes substantive improvements to the instrument, it could be retested and a new PCS would be developed for the new XRF model. PCSs for various XRF instruments can be viewed and downloaded from HUD's web site at www.hud.gov/offices/lead/guidelines/hudguidelines/index.cfm (scroll down to Addendum 3). The PCSs can also be accessed by: Entering the OHHLHC web site at www.hud.gov/offices/lead, selecting "Guidance/technical guidelines" in the left hand margin, selecting the underlined link "Browse the Guidelines" under Technical Guidelines, and scrolling down to Addendum 3.

The PCS provides the user (e.g., a certified lead-based paint inspector) with both performance parameters and basic quality control procedures for a particular instrument. Examples of performance parameters and procedures that are reported in the PCS include: bias and precision of paint-lead measurements on different substrates and for different modes of operation (i.e., reading times); calibration procedures and "calibration check limits," and information on substrate correction, including the procedures to be followed if substrate correction is needed. With the PCS, an operator can determine the "range of uncertainty" when operating the instrument in a specific mode on a given substrate. If a reading (expressed as mg Pb/cm^2) falls within this range the operator should not consider the results as conclusive and a paint sample would have to be collected for laboratory analysis in order to obtain a definitive lead measurement.

Manufacturers currently manufacture XRF models that can measure lead in other media such as dust and soil. The ability to measure lead in a dust sample is especially valuable because dust samples of residential surfaces are used for assessing lead dust accumulation and for "clearing" dwelling units for habitation following the completion of lead hazard control activities. (See the EPA's lead hazard standards rule, published in the Federal Register at volume 66, pages 1205-1240, January 5, 2001; available at www.epa.gov/opptintr/lead/leadhaz.htm) These dust samples are collected as "wipe samples" using a pre-moistened cellulose towelette; the EPA cites, for example, the HUD *Guidelines*, or the American Society for Testing and Materials (ASTM)

standards E 1728 and E 1792, or equivalent.) The practice for analyzing the lead content of wipe samples in pre-1978 housing is to send them to a laboratory recognized under EPA's National Lead Laboratory Accreditation Program (NLLAP), for acid digestion and analysis (see www.epa.gov/opptintr/lead/nllap.htm).

The ability to quickly and accurately obtain dust-lead measurements in the field is desirable for several reasons. Perhaps most importantly it could potentially reduce the costs of lead hazard control treatments because dust-lead clearance measurements could be obtained immediately after cleaning is completed and surfaces have dried. If dust-lead loadings (expressed as µg Pb/ft^2) were found to equal or exceed clearance standards, the cleaning crew could be recalled (or may still be on site) for additional cleaning. This could reduce the amount of time that families had to be relocated to lead-safe housing (a standard practice unless interventions are minor) and thus reduce treatment costs and help to minimize the inconvenience of residents. This ability could also be valuable in a risk assessment setting to provide residents with immediate feedback on steps they could take to protect themselves from lead exposure (e.g., combined with instruction and cleaning supplies).

Through this Task Order the contractor shall develop an objective system for assessing the performance of portable XRF instruments in measuring lead in dust-wipe samples, analyzing the collected data, and reporting these data in a standard format. There is currently no third party system in place to objectively test the capability of XRF instruments for the measuring lead in dust wipe samples as there is for the measurement of lead in paint. It is not feasible for HUD to create a test system in-house because it requires laboratory facilities and the level-of-effort required would exceed the availability of the technical staff.

3.0 SCOPE OF SERVICES

The Contractor shall furnish all the necessary equipment, materials, services and qualified personnel necessary to perform the tasks described below under 4.0 - Tasks, to develop a system for assessing the performance of XRF analyzers in measuring lead in dust-wipe samples. Direction shall be taken from and acceptance for all deliverables shall be by the HUD Government Technical Representative (GTR).

4.0 TASKS

Task Order Overview and Requirements

The principal mission of the Contractor will be to:

- Develop a system for assessing the performance of XRF analyzers in measuring lead in wipe-dust samples, and
- Develop a standard protocol for analyzing and reporting test results similar in concept to the PCS that is used for reporting the performance of XRFs for analyzing lead in paint.

The Contractor shall develop an objective test system for assessing the performance of field portable XRF analyzers in the measurement of lead in dust wipe samples, analyzing test results, and reporting results in a standard format. This is similar in concept to the current system that has been developed for assessing the performance of XRF analyzers for the measurement of lead in paint films.

To develop this system the Contractor will need to review available literature on the performance of XRF analyzers in measuring lead in dust wipe samples. Examples include a study funded by a HUD research grant and posted on the OHHLHC web site, and a report published by the EPA's Environmental Technology Verification (ETV) program.

The Contractor will also consult with other stakeholders to obtain their feedback on the development of a test system, including other federal agencies (e.g., EPA, the Centers for Disease Control and Prevention (CDC)), state and local governmental lead hazard control programs, and non-profit organizations actively involved in promoting lead poisoning prevention.

The Contractor will also be required to perform some preliminary experiments during the development of the test system. This includes the testing of various wipe materials to determine if the type of wipe is an important variable in lead measurement. For purposes of standardization, the wipes tested shall meet the requirements of ASTM Standard E 1792. Other factors that require study include the effects of moisture on XRF measurements of lead in dust-wipes, and suitable reference materials to use in creating the test dust-wipe samples. The goal is to create a test system that mimics to the extent feasible the types of samples that will be measured by instruments in the field.

The Contractor's success will be determined by the timely delivery of acceptable reports and work products. The Contractor will be expected to ensure that necessary corrections to the reports and work products are executed in a timely manner consistent with the requirements of this Task Order.

Listed below are specific tasks that shall be completed by the Contractor.

ACTIVITIES UNDER THIS TASK ORDER:

1) Develop a Work Plan

The Contractor shall develop a Work Plan to specify tasks to be performed, timing of those tasks, and personnel to be assigned (by name, labor category and amount of time). This work plan shall be drafted and provided to HUD for comment prior to a meeting to be held at the OHHLHC. This plan shall include the necessary steps to accomplish the goals of this Task Order, including the resources and personnel necessary, the proposed schedule for the activities, and the proposed deliverables.

In addition, the Contractor shall identify performance measures, subject to approval by

the GTR, to monitor the effort of the Contractor. This Work Plan shall be delivered within 30 days of Task Order award and shall be maintained up-to-date and provided to the GTR within 10 days of any changes being made. Travel to the OHHLHC office for a planning meeting is required. The Project Manager shall attend this meeting, along with at least one senior member of the proposed field staff.

In developing the Work Plan, the Contractor shall consult with other stakeholders as described above. The stakeholders shall be provided with a brief "concept paper" on the project that solicits their feedback. Their suggestions will be summarized and discussed with the GTR and other OHHLHC staff, and may be incorporated into the project design.

2) Conduct a Review of the Published Literature

The Contractor shall work with the GTR to obtain and critically review previous studies of the performance of XRFs in measuring lead in dust wipes. The results of this review are expected to inform the design of subsequent work under this Task Order. This is not expected to be a major effort because of the paucity of published materials on this topic.

The results of this review shall be presented to the GTR in a brief written summary. Discussions will be held between the GTR on how the results of this review will influence the development of the test system.

3) Preliminary Experiments

The Contractor shall perform preliminary experiments to obtain knowledge needed to develop the test system. Experiments are needed to:

A) Determine the effect, if any, of the brand of wipe material on the measurement of lead in reference dust by portable XRF. All wipe materials must meet the requirements of ASTM standard E 1792 (*Standard Specification for Wipe Sampling Materials for Lead in Surface Dust*), which is available for purchase at www.astm.org. The effect of adding an adhesive material (e.g., double-sided tape) to the dried wipe to keep the test dust from shifting position on the wipe should also be investigated. This is needed so that a test wipe can be stored and reused with as little change as possible in the distribution of lead particles within the folded wipe sample.

B) Determine the effect of moisture content on the measurement of lead in dust-wipes. Findings from a HUD-supported study (Clark et al. 2002) suggested that moisture content is an important variable. If moisture is confirmed to have a significant effect on measurement, the Contractor shall determine whether an adjustment factor can be used to convert results obtained from low moisture wipes to results expected from high moisture wipes. This is important because the archived "test wipes" will be dry (they would deteriorate if stored for a long period with high moisture content). It will also be necessary to determine whether or not a unique adjustment factor would have to be calculated for each instrument.

C) Identify appropriate reference materials to be used in creating test wipes. Reference dusts with certified lead content can be obtained from various sources (e.g., the National Institute of Standards and Technology or NIST). These materials are homogeneous "powders" to minimize variability in the lead content of subsamples. Although use of these reference materials to produce test wipes is expected, HUD is interested in the production of test wipes that will present a non-homogeneous material to the XRF to better simulate real-world samples. This could be created for example, by using paint chip particles with low to moderate lead content. HUD can supply the methodology for creating manufactured lead paint, if needed.

4) Develop a Test System

The Contractor shall use the results of the preliminary experiments to develop a test system. Test wipes with varying lead content or "surface loading" shall be created to provide sufficient data for statistical modeling of the XRF performance at various lead loadings. Test wipes should be produced with lead content that "clusters" around the current standards for lead on floors, window sills, and window troughs (40μg Pb/ft^2 for floors and 250 μg Pb/ft^2 for window sills for both risk assessment and clearance, and 800 μg Pb/ft^2 as a clearance standard for troughs). See EPA's ETV study report as an example of this design (the test plans and reports on the performance of specific instruments can downloaded from the web at www.ornl.gov/divisions/casd/etv/lead-verification.htm).

As part of the test system development, the Contractor shall develop a standard protocol for analyzing the data that are obtained during the testing of XRF instruments and generating the desired "performance parameters" for the instrument. For example, the EPA report, *Methodology for XRF Performance Characteristic Sheets*, provides an explanation of the statistical methodology used to construct the data that are presented in the PCSs for analysis of lead in paint by XRF. A copy of this document can be obtained from the National Lead Information Clearinghouse at 1-800-424-LEAD.

A key finding from the modeling of the test results will be the target values above and below the standards that characterize the interval of specified uncertainty in measurements centered at each of the lead-dust standards. For example the interval of values surrounding the floor-dust standard of 40 μg Pb/ft^2 where the XRF lead measurements could not be considered "statistically different" from the standard with 95% confidence might be found to extend from 20 μg/ft^2 to 60 μg/ft^2. In such a case, a floor measurement would thus have to be less than 20 μg/ft^2 for a floor sample to pass clearance (i.e., below this reading there would be reasonable certainty that the true lead loading was less than the floor-dust standard of 40 μg/ft^2).

Other parameters to be determined include bias and precision when the instrument is used in different operating modes, the limit of detection, and the limit of quantification, for measuring lead in dust-wipe samples.

The Contractor shall also develop a standard document template, similar in concept to the PCS for XRF testing of lead in paint, to report the results of the XRF testing for lead in dust wipes. Once the draft test system, analytical protocol, and reporting template have been

developed and accepted by the GTR, the Contractor shall use the system to test at least one XRF instrument that is advertised as having the capacity to measure lead in dust-wipe samples.

The draft system and the results of its initial use to test an XRF shall be delivered to the GTR. HUD will provide comments to the Contractor, and the Contractor shall amend the test system based on the comments. This "external review draft" will then be sent to outside reviewers for comment.

5) Obtain Comments on the Draft Test System, Analytical Protocol, and Reporting Template and Complete Final Products

The Contractor shall provide copies of the external review draft test system, analytical protocol, and reporting template to other federal agencies for review and comment**.** The template should report the results of the XRF instrument that was tested (concealing the identity of the actual instrument and manufacturer). At a minimum, the package should be provided to technical staff at the EPA and CDC for review. The contractor shall then summarize the comments received from the reviewers and discuss with HUD which changes are to be made in the draft materials based on the comments. After the needed changes are identified, the Contractor shall make final changes to the materials.

5.0 DELIVERABLES

Final acceptance of all deliverables will be subject to a quality review performed by the HUD GTR. Each deliverable shall be submitted with one electronic and three paper copies.

(See Table - Schedule of Deliverables, next page.)

HUD will provide comments or concurrence on deliverables within 10 business days of receipt by the GTR.

PLACE OF PERFORMANCE

This work shall be performed in Contractor's space with Contractor's equipment except for site work and otherwise as specifically authorized. Travel to the OHHLHC for meetings is required; the Project Manager shall attend these meeting. Travel to conduct site visits for this project shall involve appropriate levels of technical personnel. Travel expenses shall be minimized. The Contractor shall make efforts to schedule and conduct visits to multiple sites during a single trip to minimize travel expenses.

6.0 PERIOD OF PERFORMANCE

The period of performance for this effort is 16 months upon Task Order award.

Schedule of Deliverables

Develop a System for Assessing the Performance of X-Ray Fluorescence Analyzers in Measuring Lead in Wipe-Dust Samples

Task	Deliverable	Due Date after start of Task Order
1a. Draft Work Plan	Work plan detailing the approach to conducting the work	4 weeks.
1b. Final Work Plan	Work plan responsive to HUD comments.	6 weeks
2a. Draft Literature Review	Critical review of the relevant literature.	8 weeks
2b. Final Literature Review	Review responsive to HUD comments.	11 weeks
3a. Draft report on preliminary experiments	Draft report describing the preliminary experiments and summarizing results.	24 weeks
3b. Final report on preliminary experiments	Report responsive to HUD comments.	27 weeks
4a. Preliminary test system for HUD review	Preliminary test system consisting of a test protocol, data analysis protocol, a report template, and XRF test results.	44 weeks
4b. External review draft of test system	External review draft test system consisting of a test protocol, data analysis protocol, a report template, and XRF test results.	48 weeks
5a. Draft summary and reply to comments from external reviewers	Summary of comments from external reviewers and reply to external comments.	54 weeks
5b. Final report on external review	Summary and reply to external comments, responsive to HUD comments.	57 weeks
6a. Draft test system	Test system consisting of a test protocol (with archived test samples), a data analysis protocol, and a reporting template.	60 weeks
6b. Final test system	Test system responsive to HUD comments.	63 weeks

7a. Draft task order final report	Report highlighting Contractor's efforts to support the OHHLHC, address and demonstrate the value of the services performed, and significant findings and progress made during the task order.	64 weeks
7b. Final task order report	Final report responsive to HUD comments.	66 weeks

II. Sample Task Specification

This is included for illustrative purposes only.

Sample Task Specification

Development of a QA/QC Template and Identification of Priority QA/QC Needs for HUD Healthy Homes Initiative Grantees

Introduction

In October 1998, in response to Executive Order 13045 on "Protection of Children from Environmental Risks and Safety Risks," the Department of Housing and Urban Development launched the Healthy Homes Initiative (HHI). The Initiative builds upon the Department's existing activities on housing-related health and safety issues, including lead hazard control, building structural safety, electrical safety, and fire protection, to address multiple childhood diseases and injuries related to housing in a more coordinated fashion. Healthy Homes activities focus on researching and demonstrating effective assessment and intervention methods and on public education and outreach. HUD developed a plan of baseline research and demonstration projects for the Initiative with the assistance of a panel of nationally-recognized experts from the private sector, and Federal, State and local governments. Much of this work is accomplished through competitive grants. Additional work is being conducted through agreements with other federal agencies.

The purpose of this task specification is to develop general QA/QC guidance for HHI Grantees and to assess and report on specific QA/QC needs of HHI grantees.

Tasks

The project consists of two tasks:

1. Develop a core set of quality management practices,
2. Develop a list of priority QA/QC needs of HHI grantees.

Task 1. Develop a Quality Assurance/Quality Control (QA/QC) Template for HUD HHI Grantees

The final utility and defensibility of the research and demonstration projects conducted under HUD's HHI grants will be determined by the quality of study design, protocols, sample and data collection, sample and data analysis, and QA/QC on those projects. Under this task, the contractor shall work with the GTR to develop a template to be used by grantees when developing a Quality Assurance Plan for their projects. The template shall consist of headings that correspond to key QA/QC fields (e.g., data quality objectives, organizational chart and description of responsibilities) and accompanying explanatory text that will guide the grantee in responding to each subject area, provide examples, etc.

The template should cover all steps of data generation, from sample collection through data processing. It is expected that elements of the EPA's Quality Assurance Project Plan (QAPP) process can be adopted, and where appropriate modified, in creating this template. The intention is to identify the core QA/QC practices that will ensure data validity and quality without being overly burdensome to grantees in both planning and implementation.

The contractor shall initially provide the GTR with a draft outline of the template. When the contents of the outline have been approved by HUD, the contractor shall then draft text that will guide grantees in using the template to create a Quality Assurance plan.

Task 2. Develop a list of priority QA/QC needs

Under this task, the contractor shall review current research protocols and environmental measurements, drawing upon both HUD's HHI background papers and the final Statements of Work for the current HHI grantees. Some of the grantees may also be contacted directly regarding their current practices and their needs for additional guidance. Based on this review, the contractor shall develop a list of priority HHI grantee QA/QC needs. It is expected that sampling and analysis procedures related to environmental allergens (e.g., dust mites, cockroach, fungi, pet allergens) would be high priority candidates for QA/QC guidance to the grantees. Other needs that might be identified include carbon monoxide monitoring, bioaerosol sampling, investigation of fungal contamination, pesticide sampling and analysis. Other needs for QA/QC guidance (e.g., ambient or material moisture measurement) are also likely to be identified. The purpose of this step is to identify the highest priority needs.

Once the list of the top 6-8 needs have been identified, the contractor shall provide a description of how each of the priorities can be addressed by HUD. This description should describe options (if more than one option is appropriate) for addressing each priority and the strengths and weaknesses of each option.

Deliverables/Timeline

Deliverables and schedule are presented in Table 1 below.

Table 1. Deliverables and Schedule.

Deliverable	Schedule
Draft outline of QA template	2 weeks
Draft list of priority HHI Grantee QA/QC needs	4 weeks
Draft QA template and explanatory text Draft list of priority HHI Grantee QA/QC needs and HUD options	8 weeks
Final QA template Final list of priority HHI Grantee QA/QC needs and HUD options	12 weeks

Budget

Table 2 provides the labor categories and level of effort estimated to complete the work described above. The ODCs include travel costs for one trip to Washington by two of the contractor's staff.

Table 2 Labor Categories, Level of Effort, and Other Direct Costs

Labor Category	Rate	Hrs	Cost
Sr. Chemist		16	
Sr. Editor/writer		16	
Sr. Env. Health Sci. Spec.		24	
Jr. Env. Health Sci. Spec.		40	
Sr. Epidemiologist		16	
Sr. Industrial Hygienist		16	
Sr. QA Coordinator		24	
Jr. QA Coordinator		120	
Sr. Statistician		8	
Jr. Statistician		24	
Sr. Toxicologist		8	
Sr. Secretary		4	
Jr. Secretary		16	
TOTALS			

III. SF-1411, CONTRACT PRICING PROPOSAL COVER SHEET AND INSTRUCTIONS

IV. SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

UNIFORM CONTRACT FORMAT

SECTION L - INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

Special Proposal Instructions

Part I - Cost and Price Analysis (6 copies)

Offerors should include the following elements in their submissions:

1. Proposed labor rates for staff listed in the labor category table of Section B showing: (1) the labor category, (2) the fully-loaded hourly rate, inclusive of the basic hourly rate, the Contractor's mark-up for fringe, general and administrative, overhead expenses and fee (profit).

2. The proposed labor rates under paragraph 1 shall be provided for each contract year.

3. Price proposals will be evaluated based on the sample ordering amounts ("numbers of hours for estimation") shown for each labor category in the cost proposal table in Section B. The prices are to be entered by offeror. The numbers of hours for estimation are not commitments to order, but will be used only as part of the evaluation of offers for contract award. An electronic version of this table (a spreadsheet in Microsoft Excel) can be downloaded at no cost from the HUD web site at www.hud.gov/offices/lead, and used for recording the offered unit prices per hour for each labor category. In addition to submitting the paper copy of the table required as part of their proposal, offerors are requested to submit a copy of the completed spreadsheet on a 3-1/2 inch floppy disk or CD-ROM, readable by Microsoft Excel 2000 operating under Microsoft Windows 95 (HUD staff's computer spreadsheet program and operating system as of the time of preparation of the contract). In case of conflict between the printed and electronic versions, the printed version shall be used.

Part II - Cover Letter

The proposal shall be accompanied by a transmittal letter that provides the following information:

1. The number and title of the Government's Request for Proposals, and the subject of the Request.

2. The name, address and telephone number of the organization that is submitting the proposal (the offeror), including the subpart of the organization, if any, that will be responsible for the work.

3. The name, address and telephone number of the individual(s) authorized to negotiate and sign for the offeror.

4. The name of the project manager or other person who will manage the contract work.

5. The name(s) and address(es), if any, of joint venture members, consortium members, major subcontractors or consultants, and the name(s) of their respective project managers.

Part III - Resumes of Personnel with Major Role in Contract Performance

Resumes of all persons who will play a major role in carrying out task orders and task specifications shall be included in the proposal, indicating their demonstrated specialized experience and capabilities to do this type of work. The resumes shall include, but be not limited to: education and training, professional experience (including current and previous employment, experience, and honors) and accomplishments, and pertinent publications. Resumes must not exceed three consecutively numbered, 8.5 x 11 inch pages for each individual; additional pages will not be read.

The resumes shall be organized by labor category. For any person being proposed as expert in more than one labor category, a resume appropriate for each labor category shall be provided in the proposal for that labor category.

Resumes for particular persons at the junior level are not be required, unless such persons are expected to make significant contributions to the completion of task orders and task specifications.

Part IV - Organizational Experience and Management

Provide a discussion of the organization's experience in organizing and managing teams of in-house and other personnel in the successful completion of tasks similar to both the short-term task specifications and longer term task orders that will be needed by HUD. Offerors should also provide a description of their approach to managing projects in a manner that will ensure the on-time, within budget production of high quality work products. This section of the proposal must not exceed 20 pages in length.

Part V - Past Performance of Organization

Provide two-page descriptions (10- to 12-point type with 1 inch margins) of five to ten recently completed projects that are relevant to the work required under this solicitation. For each project, the descriptions should include:

The name of the client.

The name and telephone number of a person employed by the client who can be contacted regarding the offeror's performance in completing the work.

The original dollar value of the work, any the dollar value after any change orders.

The original period of performance, and the period of performance after any change orders.

The offeror's project manager.

The title of the project.

A narrative of the project's scope of work including goals, methods, problems encountered and approaches used to overcome the problems, reasons for any change orders, and results of the work.

Part VI - Sample Task Orders and Task Specifications

The sample task orders in Section J are for bidding purposes only. However, they do represent the contemplated type of effort the contractors might undertake under the direction of the GTR. For the purpose of this proposal, the offeror shall describe how it would address each of the sample task orders. Each description should be brief (no more than 20 pages) but complete, with breakdowns of how it would address the various subtasks, its proposed level of effort (numbers of hours in selected labor categories, plus other direct cost items), and estimated total costs.

The sample task specifications are included for informational purposes only, and should not be addressed by the offeror in its proposal.

Part VII - Contract Size

It is expected that one or more contracts of one year with up to four option years, exercisable at the Government's sold discretion, will result from this procurement. The maximum amount of funds per contract to be awarded shall not exceed $15 million. The total minimum amount of funds per contract to be awarded is $300,000. The amount of $100,000 per contract shall be obligated upon signing of the contract but shall not be drawn upon by the Contractor except as payment for individual task specifications ordered by the GTR. Task orders will be separately negotiated and authorized by the Contracting Officer.

SECTION M - EVALUATION FACTORS FOR AWARD

All proposals received in accordance with the due date and time will be reviewed for completeness; offerors will be allowed to correct minor, non-substantive omissions before evaluation of their proposals. Proposals with substantive omissions will not be evaluated; the remaining proposals will be scored according to the following factors. Factor weights out of the maximum of 100 points are indicated in parentheses. Each offeror should provide a statement within their proposal that addresses each of the factors.

A. Recent and Relevant Experience and Qualifications of Key Personnel Proposed for the Contract (30 *points*).

1. Experience and qualifications of person with overall responsibility for the contract. Qualifications for overall contract management as evidenced by management experience and performance and demonstrated knowledge of the field. *(10 points)*

2. Experience and qualifications of other identified personnel. Qualifications and demonstrated specialized experience, successful performance and capabilities in the fields of expertise needed to perform the scope of work. *(20 points)*

B. Organizational Experience and Management (2*0 points)*.

1. Demonstrated experience and ability of offeror's organization in successfully organizing teams of in-house and other experts to perform tasks similar to both short-term task specifications and longer term, more complex, task orders. (*10 points*)

2. Soundness of procedure for responding to task specifications and task orders quickly, including assembling and managing teams, managing tasks from start to finish to ensure completion on time and within budget, and assuring high quality work products. (*10 points*)

C. Past Performance of Organization (*15 points*).

The past performance of the organization in successfully completing work relevant to the work under this solicitation, including meeting budgets and schedules. References will be contacted, and public records may be considered, during the assessment of past performance. (*15 points*)

D. Response to Sample Task Order (*30 points*).

1. Capabilities and qualifications of senior/expert personnel as evidenced by qualifications and past performance in the successful completion of similar tasks. (*10 points*)

2. Soundness of proposed approaches to completing the tasks, including responsiveness to HUD’s objectives, adequacy of the task order management and work plans, and use of quality assurance mechanisms. (*20 points*)